

#3
6-73-02

PCT09

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/980,525

DATE: 04/11/2002

TIME: 16:06:22

Input Set : A:\07039-28001.txt

Output Set: N:\CRF3\04112002\I980525.raw

ENTERED

4 <110> APPLICANT: Simari, Robert
 6 <120> TITLE OF INVENTION: Adenovirus vectors encoding brain natriuretic peptide
 8 <130> FILE REFERENCE: 07039-280001
 10 <140> CURRENT APPLICATION NUMBER: US 09/980,525
 C--> 11 <141> CURRENT FILING DATE: 2002-03-18
 13 <150> PRIOR APPLICATION NUMBER: PCT/US00/14351
 14 <151> PRIOR FILING DATE: 2000-05-24
 16 <150> PRIOR APPLICATION NUMBER: US 60/135,490
 17 <151> PRIOR FILING DATE: 1999-05-24
 19 <160> NUMBER OF SEQ ID NOS: 18
 21 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 23 <210> SEQ ID NO: 1
 24 <211> LENGTH: 1922
 25 <212> TYPE: DNA
 26 <213> ORGANISM: Homo sapiens
 28 <400> SEQUENCE: 1
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 30 ctgccttttc cagcaacggt ggggtgggga ggcaggaaga aagcgccaac ctaggacccc 120
 31 ggagatttgc agcaaaggaa gaagcgggag acgggcactt gtctgtgtct ccagcgcgtt 180
 32 cctgcccccc gccgaccggg cccatttcta tacaaggteg ctctgcccgg tctccacctc 240
 33 ccacgtgcag gccgcggagg ggctcattcc cgggccctga tctcagaggc ccggaatgtg 300
 34 gctgataaat cagagactag acctgcatgg caggcaggcc cgacactcag ctccaggata 360
 35 aaaggccacg gtgtcccag gagccaggag gagcaccgcc caggctgagg gcaggtggga 420
 36 agcaaaccgg gacgcacgc agcagcagca gcagcagcag aagcagcagc agcagcctcc 480
 37 gcagtccttc cagagacatg gatccccaga cagcaccttc cggggcgctc ctgctcctgc 540
 38 tcttcttgca tctggctttc ctgggaggtc gttcccaccc gctgggcagc cccggttcag 600
 39 cctcggactt ggaaacgtcc ggggttacagg tgagagcgga gggcagctca gggggattgg 660
 40 acagcagcaa tgaaagggtc ctacactgct gtcccaagag gccctcatct ttcctttgga 720
 41 attagtataa aaggaatcag aaaatggaga gactgggtgc cctgaccctg tacccaaggc 780
 42 agtcggttca cttgggtgcc atgaagggtc ggtgagccag ggggtgggtc ctgaggcttg 840
 43 gacgccccca ttcattgcag gagcagcgca accatttgca gggcaaaactg tcggagctgc 900
 44 aggtggagca gacatccctg gagcccctcc aggagagccc ccgtcccaca ggtgtctgga 960
 45 agtcccggga ggtagccacc gagggcatcc gtgggcaccg caaaatggtc ctctacacc 1020
 46 tgcgggcacc acgaagcccc aagatggtgc aagggtctgg ctgctttggg aggaagatgg 1080
 47 accggatcag ctctccagtg ggcctgggct gcaaaggtaa gcacccctg ccacccggc 1140
 48 cgccttcccc cattccagtg tgtgacactg ttagagtcac tttgggggtt gttgtctctg 1200
 49 ggaaccacac tctttgagaa aaggtcacct ggacatcgct tcctcttggt aacagccttc 1260
 50 agggccaagg ggtgcctttg tgggaattag aaatgtgggc ttatttcatt accatgccc 1320
 51 caataccttc tccccacctc ctacttctta tcaaaggggc agaattctct ttgggggtct 1380
 52 gtttatcatt tggcagcccc ccagtgggtc agaaagagaa ccaaacattt cctcctggtt 1440
 53 tcctctaaac tgtctatagt ctcaaaggca gagagcagga tcaccagagc aatgataatc 1500
 54 cccaatttac agatgaggaa actgaggctc agagagttgc attaagcctc aaacgtctga 1560
 55 tgactaacag ggtggtgggt ggcacacgat gaggttaagct cagcccctgc ctccatctcc 1620

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56 caccctaacc atcatcacc tctctctttc cctgacagtg ctgaggcggc attaagagga 1680
57 agtcctggct gcagacacct gcttctgatt ccacaagggg ctttttcctc aaccctgtgg 1740
58 ccgcctttga agtgactcat tttttttaat gtatttatgt atttatttga ttgttttata 1800
59 taagatgggt tcttaccttt gagcacaataa tttccacggg gaaataaagt caacattata 1860
60 agctttatct tttgaaactg atttgtcttg gcgcattaaa aataatccct catttcaaag 1920
61 aa 1922

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63 <210> SEQ ID NO: 2

64 <211> LENGTH: 134

65 <212> TYPE: PRT

66 <213> ORGANISM: Homo sapiens

68 <400> SEQUENCE: 2

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69 Met Asp Pro Gln Thr Ala Pro Ser Arg Ala Leu Leu Leu Leu Phe
70 1 5 10 15
71 Leu His Leu Ala Phe Leu Gly Gly Arg Ser His Pro Leu Gly Ser Pro
72 20 25 30
73 Gly Ser Ala Ser Asp Leu Glu Thr Ser Gly Leu Gln Glu Gln Arg Asn
74 35 40 45
75 His Leu Gln Gly Lys Leu Ser Glu Leu Gln Val Glu Gln Thr Ser Leu
76 50 55 60
77 Glu Pro Leu Gln Glu Ser Pro Arg Pro Thr Gly Val Trp Lys Ser Arg
78 65 70 75 80
79 Glu Val Ala Thr Glu Gly Ile Arg Gly His Arg Lys Met Val Leu Tyr
80 85 90 95
81 Thr Leu Arg Ala Pro Arg Ser Pro Lys Met Val Gln Gly Ser Gly Cys
82 100 105 110
83 Phe Gly Arg Lys Met Asp Arg Ile Ser Ser Ser Ser Gly Leu Gly Cys
84 115 120 125
85 Lys Val Leu Arg Arg His
86 130

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88 <210> SEQ ID NO: 3

89 <211> LENGTH: 32

90 <212> TYPE: PRT

91 <213> ORGANISM: Canis sp.

93 <400> SEQUENCE: 3

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94 Ser Pro Lys Met Met His Lys Ser Gly Cys Phe Gly Arg Arg Leu Asp
95 1 5 10 15
96 Arg Ile Gly Ser Leu Ser Gly Leu Gly Cys Asn Val Leu Arg Lys Tyr
97 20 25 30

```

99 <210> SEQ ID NO: 4

100 <211> LENGTH: 1803

101 <212> TYPE: DNA

102 <213> ORGANISM: Canis sp.

104 <400> SEQUENCE: 4

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105 cgatcagggg tgttggggcg gaggaacgg aggggaaggag ggagcggagg aggcccgagg 60
106 actgttggtg tccccctcct gcccttttgg ggccaggccc acttctatac aaggcctgct 120
107 ctccagcctc caccgcggcg ggtatggtgc aggcgcggag gggcgcatte cccgccttg 180
108 agctcagcgg ccggaatgcg gccgataaat cagagataac cccaggcgcg ggataaggga 240
109 taaaaagccc ccgttgccgc gggatccagg agagcaccgc cggcccaagc ggtgacactc 300
110 gaccccggtc gcagcgcagc agctcagcag ccggacgtct ctttccccac ttctctccag 360

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111 cgacatggag ccctgcgag cgctgccccg ggcctcctg ctctcctgt tcttgacct 420
112 gtgcccactc ggaggccgcc cccaccgct gggcgccgc agccccgct cggaagcctc 480
113 ggaagcctca gaagcctcgg ggttggtggc cgtgcagggt agcgtcagc ctgcctgaag 540
114 gccgcggcgg gtggcagcag gtcacggggg cttagccact gtcccaagtc ctgagctcc 600
115 cttgggaatt agtgataagg gaatcagaaa gtgacgagat tgggtgccag gactccatac 660
116 ccaaggcggc ggcttactt ggggtgcaagg gtggttcgc cccggcgtgg gttcctgagg 720
117 ctgagccgt ccattgcagg agctgctggg ccgtctgaag gacgcagttt cagagctgca 780
118 ggcagagcag ttggccctgg aaccctgca ccggagccac agccccgag aagccccgga 840
119 ggccggagga acgccccgtg gggtcctgc accccatgac agtgctctcc aggcctgag 900
120 aagactacgc agccccaga tgatgcacaa gtcaggggtc tttggccgga ggctggaccg 960
121 gatcggtcc ctgagtgcc tgggtgcaa tggtaagccg cctccctgcc gccttggtc 1020
122 cccctcccca gcccctggg ttgacctt ggaacctt ctgggtttgt tgtctcggg 1080
123 gatcacactc tgaggaaagg acatctggac atcgtctctt cttgctgaca gtcctaagg 1140
124 ccaaggagta cgtttctgga aatactacgt gtggacatc ttgtccaggg tccctacca 1200
125 cctcctagcc cctcctgcc tctcgaccc aagggcagaa tcattctagg atggaatcag 1260
126 tcgttgctg gaagcatctc cttggagcag aaagatcct aaacatctc ctgtagctc 1320
127 tctctgctg tctgtagcca cgaaggcaga ggtcagggtc accagggcag tgatgattcc 1380
128 cagttaacag aggaggagac tgaggtctag agagatggat tattccaaag cctcaaaca 1440
129 ccagatcggc tgagggtggg gttgggtgca gggatggctc ctgggcttgg gaagctcga 1500
130 tctgcctca gtctccacc tgacgccatc atccccctc ctctcctccc acagtgtga 1560
131 gaaagtatta aggaggaagt cccgactgcc cacatctgca ttggattctt cagcagcccc 1620
132 tgagccccctt ggaagcagat cttatttatt cgtatttatt tattttatta tttcgattgt 1680
133 tttatataag atgactctga cgcgcagca cggattttcc acggtgaaat aaagtcaacc 1740
134 ttagagcttc ttttgaaacc gatttgctcc tgtgcattaa aagtaacaca tcatttaaaa 1800
135 aaa 1803

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137 <210> SEQ ID NO: 5

138 <211> LENGTH: 4

139 <212> TYPE: PRT

140 <213> ORGANISM: Artificial Sequence

142 <220> FEATURE:

143 <223> OTHER INFORMATION: consensus sequence

W--> 145 <221> NAME/KEY: VARIANT

146 <222> LOCATION: (2)...(3)

147 <223> OTHER INFORMATION: Xaa = Any Amino Acid

W--> 149 <400> 5

W--> 150 Arg Xaa Xaa Arg

151 1

153 <210> SEQ ID NO: 6

154 <211> LENGTH: 330

155 <212> TYPE: DNA

156 <213> ORGANISM: Homo sapiens

158 <400> SEQUENCE: 6

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159 tcccaccgc tgggcagccc cgggtcagcc tcggacttgg aaacgtccgg gttacaggag 60
160 cagcgcaacc atttgaggc caaactgtcg gagctgcagg tggagcagac atccctggag 120
161 cccctccagg agagccccg tcccacaggt gtctggaagt cccgggagggt agccaccgag 180
162 ggcacccgtg ggcaccgcaa aatggctctc tacaccctgc gggcaccacg aagccccaa 240
163 atgggtgcaag ggtctggctg ctttgggagg aagatggacc ggatcagctc ctccagtggc 300
164 ctgggctgca aagtgtgag gcggcattaa 330
166 <210> SEQ ID NO: 7

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167 <211> LENGTH: 109
168 <212> TYPE: PRT
169 <213> ORGANISM: Homo sapiens
171 <400> SEQUENCE: 7
172   Ser His Pro Leu Gly Ser Pro Gly Ser Ala Ser Asp Leu Glu Thr Ser
173     1             5             10             15
174   Gly Leu Gln Glu Gln Arg Asn His Leu Gln Gly Lys Leu Ser Glu Leu
175             20             25             30
176   Gln Val Glu Gln Thr Ser Leu Glu Pro Leu Gln Glu Ser Pro Arg Pro
177             35             40             45
178   Thr Gly Val Trp Lys Ser Arg Glu Val Ala Thr Glu Gly Ile Arg Gly
179             50             55             60
180   His Arg Lys Met Val Leu Tyr Thr Leu Arg Ala Pro Arg Ser Pro Lys
181             65             70             75             80
182   Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp Arg Ile Ser
183             85             90             95
184   Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His
185             100            105
187 <210> SEQ ID NO: 8
188 <211> LENGTH: 99
189 <212> TYPE: DNA
190 <213> ORGANISM: Homo sapiens
192 <400> SEQUENCE: 8
193   agccccaaga tgggtgcaagg gtctggctgc ttggggagga agatggaccg gatcagctcc   60
194   tccagtggcc tgggctgcaa agtgctgagg cggcattaa                               99
196 <210> SEQ ID NO: 9
197 <211> LENGTH: 32
198 <212> TYPE: PRT
199 <213> ORGANISM: Homo sapiens
201 <400> SEQUENCE: 9
202   Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp
203     1             5             10             15
204   Arg Ile Ser Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His
205             20             25             30
207 <210> SEQ ID NO: 10
208 <211> LENGTH: 145
209 <212> TYPE: DNA
210 <213> ORGANISM: Artificial Sequence
212 <220> FEATURE:
213 <223> OTHER INFORMATION: primer
215 <400> SEQUENCE: 10
216   gcagatatcc atggatcccc agacagcacc ttcccgggcg ctctgctcc tgcctctctt   60
217   gcatctggct ttcctgggag gtcgttccca cccgctgggc gaggtgaagt acgaccctg   120
218   ctctggccac aagatcgacc gcac                                     145
220 <210> SEQ ID NO: 11
221 <211> LENGTH: 127
222 <212> TYPE: DNA
223 <213> ORGANISM: Artificial Sequence
225 <220> FEATURE:

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226 <223> OTHER INFORMATION: primer
228 <400> SEQUENCE: 11
229   gaagatcttc ttaggcgctg gtgctggggg cgttggggcg ggggtcgcg aggctggggc   60
230   agcccagggt gctcacgtgg ttgatgcggt cgatcttggt gccgaagcag gggtcgtact   120
231   tcacctc                                     127
233 <210> SEQ ID NO: 12
234 <211> LENGTH: 30
235 <212> TYPE: DNA
236 <213> ORGANISM: Artificial Sequence
238 <220> FEATURE:
239 <223> OTHER INFORMATION: primer
241 <400> SEQUENCE: 12
242   tgcagatatt catggatccc cagacagcac   30
244 <210> SEQ ID NO: 13
245 <211> LENGTH: 32
246 <212> TYPE: DNA
247 <213> ORGANISM: Artificial Sequence
249 <220> FEATURE:
250 <223> OTHER INFORMATION: primer
252 <400> SEQUENCE: 13
253   gaagatcttc ttaggcgctg gtgctggggg cg   32
255 <210> SEQ ID NO: 14
256 <211> LENGTH: 24
257 <212> TYPE: DNA
258 <213> ORGANISM: Homo sapiens
260 <400> SEQUENCE: 14
261   catcttgggg cttcgtggtg cccg   24
263 <210> SEQ ID NO: 15
264 <211> LENGTH: 176
265 <212> TYPE: DNA
266 <213> ORGANISM: Artificial Sequence
268 <220> FEATURE:
269 <223> OTHER INFORMATION: primer
271 <400> SEQUENCE: 15
272   gaagatcttc ttaggcgctg gtgctggggg cgttggggcg ggggtcgcg aggctggggc   60
273   agcccagggt gctcacgtgg ttgatgcggt cgatcttggt ggccgaagca gggtcgtac   120
274   ttcacctcca tcttgggggt tcgtggtgcc cgcagggtgt agaggacat tttgcg   176
276 <210> SEQ ID NO: 16
277 <211> LENGTH: 28
278 <212> TYPE: PRT
279 <213> ORGANISM: Homo sapiens
281 <400> SEQUENCE: 16
282   Ser Leu Arg Arg Ser Ser Cys Phe Gly Gly Arg Met Asp Arg Ile Gly
283     1             5             10             15
284   Ala Gln Ser Gly Leu Gly Cys Asn Ser Phe Arg Tyr
285             20             25
287 <210> SEQ ID NO: 17
288 <211> LENGTH: 22
289 <212> TYPE: PRT

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